# Chemical debates yield new crop of products

By Steve Trusty

■ The debates about pest controls that began in earnest with the publication of Rachel Carson's "Silent Spring" in 1962 have prompted a number of changes in the pest control segment of the lawn and garden business. In response to media attention and increased efforts by a few small companies, more consumer interest has been shown in products called "organic," "biological," "safe" or "natural."

Products that may have been nonexistent, or known only to avid gardeners or horticultural and agricultural experimenters a few years ago, are now moving into the distribution channels. New alternative products have just been introduced, and more are on the horizon.

Even so, there has been little change in the numbers of home gardeners using organic products, according to the Gallup survey.

Some industry observers attribute this lack of real growth, particularly in insecticides, to the fact that consumers usually don't worry about insects until they have infestations. Then they want to apply a product with quick results. They want to see the predator insect die immediately, said one source. And generally speaking, organic and biological controls are slower acting. Instead of killing the insects quickly, these controls act by impairing the functions or habits of the pest, disrupting its life cycle, eventually leading to death or preventing reproduction.

Suppliers and retailers cite the consumers' and retailers' lack of knowledge on the subject as an important factor limiting the growth of this class of products.

Many people in the industry—even traditional chemical formulators—feel that the market is changing. They have researchers at work seeking more specific controls and seeking biodegradable and less toxic pest control products.

To date, the biological controls have not been as economically feasible as the traditional chemicals because the feature that gives them such ecological appeal, more specific control, makes them more expensive to use in some cases. If a variety of pest problems exist, for example, several applications with different specific products versus one application of a broad-spectrum product may need to be made.

One company specializing in organic pest controls is Safer Agro-Chem Inc., Lewistown, N.Y. In the fall of 1984, Safer conducted a public relations program to promote its products. As part of the program, Mike Atkins, vice president of Safer's U.S. division, and entomologist Sergei Condrashoff, vice president, conducted a media tour, which included stops in San Diego, Los Angeles, San Francisco, Sacramento, Portland, Seattle, Dallas, Houston, and San Antonio.

Both Safer executives were interviewed in the various markets by broadcast and print media and reported they had "good, positive

# One major supplier's view of the pest control future

■ Many of the companies mentioned in the above article on the new crop of products are young in years of small in size. They lack the marketing experience and financing potential that the larger ones have. How do the large, established companies see the future for these new pest control products?

The managers of one major marketer, Chevron Chemical Co., San Francisco, see the development of biologicals coming but slowly.

More than a year ago, Mel

media coverage." Although the purpose of the program was to promote Safer's products, Atkins says any company marketing these new products must address the entire concept and not just individual products.

On the media tour, for example, questions arose regarding controlling pests not affected by Safer products; the executives directed the interviewer to products such as Bacillus Thuringiensis, pheromones or similar controls. Says Atkins, "The whole industry needs to work together on this for maximum impact."

According to Atkins, the mass media is anxious to hear about less toxic products, and the suppliers can capitalize on this by providing factual information on what natural products will and will not do, how long they take to be effective, and how they differ from more toxic products.

Ralph Snodsmith, of the popular "Garden Hotline" radio program, agrees that many of these new products are very effective as long as everyone understands how they work. The consumer must take time to learn, and suppliers are obligated to provide the information, he said.

One manufacturer of alternative products suggests that there is an opportunity for distributors to act as the catalyst to bring these new products to the consuming public. He says that a distributor can help the retailer put together a complete department of organic or biological products. Retailers also need a combination educational/advertising

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## Consumers using various insect controls

| | 1982 | 1983 | 1984 |
|---|---|---|---|
| Chemical insecticide dust or powder | 46% | 44% | 47% |
| Chemical concentrate mixed with water, sprayed | 28 | 33 | 34 |
| R.T.U. dust or aerosol | 17 | 20 | 25 |
| Hand pick | 15 | 13 | 15 |
| Home remedies | 10 | 9 | 9 |
| Strictly organic (plant-based or organically based, such as pyrethrum, rotenone, B.T., etc.) | 8 | 7 | 6 |
| Beneficial insects | 5 | 3 | 3 |

+ or – 3 point sampling tolerance

Source: Gardens for All/Gallup Survey

Garbett, Chevron's manager of product development and evaluation, made a comprehensive evaluation of the pest control industry in a talk before the pesticide division of the Chemical Specialty Manufacturers' Assn.

In his talk, Garbett likened the plight of the manufacturers at that meeting to the biblical story of Noah building his ark to survive. He described how the lawn and garden pesticide industry has, historically, been tied to and dependent on the agricultural chemical industry.

"In reality, we continue to ride on the coattails of our brothers in the agricultural chemicals business. They develop the compounds and hopefully one or two will be spun off to fill the bill for our business, the lawn, garden and home pesticides....But the agricultural chemicals industry today is faced with one of the most difficult periods in the past 50 years."

He noted that the growth rate for chemicals used in agriculture has leveled off "compared to the tremendous growth rates of somewhere between 10 and 15 percent a year in the 1960s and 1970s."

Still discussing agricultural uses—not lawn and garden uses—he said that the growth rate for chemical usage would be between two and three percent a year, and that some

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# "The whole industry needs to work together on this for maximum impact." - Atkins, Safer Agro-Chem

program, including effective merchandising displays.

One company helping in that end is Reuter Laboratories. Dick Grandy, marketing director for Reuter, says, "We believe every garden center today should have a 'natural pest control department.'" To boost that, Reuter is offering headers and displays.

In the 1983 annual report for OTF Equities Inc., which purchased 80 percent of Reuter in October 1983, president David T. Marantette recognized consumer interest in the products. "We believe there is a consciousness developing in our country....The desire to grow safer, healthier foods in the garden and to protect people, plants and animals by using alternative pesticides, we believe, is huge." In 1985, Reuter is introducing six new products and continuing work on finding faster-acting products that it claims are environmentally safe.

Some other organizations and companies interested in offering new directions in pest control products include the Chemical Specialties Manufacturers Assn., Washington, DC; Hyponex Corp., Fort Wayne, Ind.; Kenco Chemical Co., Jacksonville, Fla.; and Ringer Corp., Eden Prairie, Minn.

CSMA is a voluntary, nonprofit membership association composed of about 400 companies engaged in the manufacture, distribution and marketing of chemical specialty products. Some of its lawn and garden members include Mobay Chemical Corp., SC Johnson & Son, FMC Corp., Allied Chemical Corp., Chevron Chemical Co., and Reuter Laboratories.

CSMA has added a Biological Pest Control Section to put special emphasis and research into biologicals and to provide a forum for the industry.

Hyponex, producer and marketer of organic lawn and garden products and fertilizers and chemical plant-care products, is offering a national branded program for a complete line of plant care products. Joe Dioguardi, executive vice president, says the real growth market is in organics. The Hyponex outdoor line is composed of completely organic materials, and organics are becoming more important to its indoor line also.

Part of the reason for Kenco's recent acquisitions of the Spectrum line of household chemicals and the Bag-A-Bug and Hot Shot insecticide lines was to give Kenco a broader base in products that could be categorized as non-pollutant, biodegradable or non-toxic, says Tom Sapinski, vice president of sales and marketing.

Another reason was to provide a national geographic base to market all of their products. While biologicals, traps and similar products presently amount to only about three percent of its sales, a heavy infestation of Japanese beetles and gypsy moths could increase that category of products to 15 to 20 percent of sales, Sapinski says.

Richard Lipsey, vice president of research at Kenco, says that education and training are necessary to better inform the public. According to Lipsey, "The misuse of any pesticide is due mainly to ignorance."

The research department at Ringer Corp. is working extensively on "bio-organic" fertilizing products that work with the natural systems of the lawn. According to Judd Ringer, chairman of the board, the "decomposition process" is part of the whole system. Bacterial and microbial activities must be kept in balance, he says. The organic content of the soil is extremely important.

Ringer believes the technology of many of the new products is hard for the average person to understand. According to Ringer, the retail clerk who is knowledgeable and will take the time to talk to customers will find the consumer has a real thirst for knowledge. "The older members of our population and the young college-educated in-

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## Supplier's view

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experts say that the rate of growth of ag chemicals will be no more than one percent. He said that the introduction of a new agricultural pesticide requires a lead time for research and development of seven to eight years. A survey of 15 manufacturers, he said, showed that the average investment by a company for R&D to develop one new product would be $20 million.

He outlined some effects that the slow growth imposed by the economics of agricultural chemicals could have on the lawn and garden segment.

"There are two things, which we in the home, lawn and garden chemicals business must face up to as factors influencing the future of our business. One, new chemicals will be developed for the big crops, the major markets, period. If a new chemical doesn't fit into small grains, soybeans, cotton or corn production, for example, it's highly questionable that any manager will make the decision to develop the materials as a commercial product.

"Two, research, from start to finish will, in my opinion, become more market driven in the future, as opposed to research-driven as in the past. This means that pesticides will become more target specific, designed to control special pest problems and to establish unique markets.

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## Some of the newer products

**Insecticidal soap:** In 1976, Agro-Chem Ltd. was founded to commercially develop a scientific discovery made by Canadian scientist George Puritch. He discovered that certain fatty acids from which soaps are made are highly insecticidal, yet non-toxic to humans and pets. Since Puritch's initial discovery, much progress has been made and now a whole line of soaps is available to combat such pests as insects, fungi, algae and moss.

**Biological insecticides:** Since the introduction of Bacillus Thuringiensis, which has proved very effective on most types of caterpillars, several other biological controls have been introduced, or are about to be. A biological control specific to mosquitoes is available from Reuter Laboratories. They also market a natural control for grasshoppers and one for crickets.

**Attractants:** Pheromones, or natural sex lures, have been isolated or synthesized. These are used to attract specific pests. In many instances, these lures are used strictly to determine the population of that insect in order to decide when to spray. In other cases, the pheromones are combined with a sticky substance on a bar or stick to control an insect population.

**Predators:** Some of the common predators, such as ladybug beetles and praying mantis, are available commercially. These predators are quite specific and can give good control.

A problem with using predators as a control is that host pests must be present in sufficient quantities to keep the predator happy. In other words, if the predator does too good a job, it will go elsewhere or die, and a pest buildup will probably cause excessive damage before the predators get re-established.

Also, a small amount of infestation and damage will have to be tolerated.

**Specific uses:** Another control approach is Monsanto's Glyphosate (Round-up), which many consider indicative of the new wave of products. Glyphosate, though not labeled organic, is non-selective but has a very specific use. It is used to kill all plants with which it comes in contact.

Because of its chemical makeup, it is bound up in the soil and becomes non-available to plants or the environment almost immediately after application.

Glyphosate came about as a result of Monsanto's search for less toxic, safer products. Monsanto packages Round-up in one-quart containers for the retail trade. The product is also available in various concentrations and under labels from several different packagers, licensed by Monsanto.

dividuals want safer products," says Ringer.

This population group will soon constitute a large portion of the population, and with the median age of avid gardeners at 45 to 54, population trends predict favorably the future of gardening in general.

This population peaked in numbers and percent of the total in the mid-1970s and dropped before bottoming out in 1983. But, the 45- to 54-year-old segment began increasing again in 1984 and will rise sharply in the early 1990s when the first of the baby boomers hit this age bracket.

It is a market that will be influenced by new scientific discoveries, by the profits that the major manufacturers gain, by the trade associations of chemical manufacturers, by controls and potential controls by governments, by environmentalists, by mail-order marketers, by publications directed to home gardeners, by extension horticulturists associated with agricultural and land-grant colleges and by the specialty lawn and garden retailers.

In short, the whole market for pest-control products is one that promises growth to meet the needs of increasing urban populations. Lawn and garden retailers and suppliers will have a significant impact on the rate and direction of growth.

The public's quest for speed, reasonable cost and effective control will be factors that will be weighed along with the questions of safety and potential damage to the environment. □

## Supplier's view ...continued

"The marketplace itself will increasingly dictate what's to be synthesized. For example, there's a need for a post-emergence grass herbicide to be used over soybeans. Let's see if we can develop one, rather than starting out with the synthesis of a new herbicide, then screening it over various crops to see where it fits. Or, how about developing a systemic fungicide that can be applied as a seed treater to control rust in wheat, rather than inventing a new fungicide and then seeing if there is a market? Very specific, and it makes a lot of sense to me."

### 'New synthetic pyrethroids'

"What are some of the 'new special pesticides' under development? Examples of some of these materials include the new synthetic pyrethroids. There are already successful ones on the market. Ambush, Pounce, Pydrin you're familiar with them and there are rumors that as many as an additional dozen are now being developed. Some are designed to be applied as low as four to five grams per acre. Many show lower toxicity to bees and fish and are very effective against spider mites.

"I believe these synthetics will have a significant impact throughout the remainder of the 1980s, and I expect continued demand for them."

**Some suppliers** and retailers are reporting good sales of four-inch plants throughout the summer.

# New hype for summer gardening?

■With two consecutive years of late, wet springs, retailers and suppliers of gardening products are entering spring 1985 with their fingers crossed and high hopes of seeing a long, warm spring with seasonal showers.

But some are doing more than just hoping. They are planning to promote sales of bedding plants with new strategies in mind, strategies that include marketing quick-growing bedding plants *throughout* the growing season.

By revising seeding schedules, some suppliers will have plants available in June and July for retailers to sell throughout the summer. And according to those retailers and suppliers who have tried this strategy before, the plan really works.

Comments gathered by the 1984 annual survey conducted by Bedding Plants Inc. reflect the respondents' evaluations of their current market conditions and their intentions for the next season.

"I sold into August, a first; planned for later sales, so plants were the best looking around," said one respondent, who obviously believes in promoting later sales.

"Still selling 4-inch impatiens, caladiums, begonias, coleus and larger pots of petunias, ageratum, impatiens, geraniums and latana," said another respondent, whose response was dated July 26.

Still others commented, "July 10, and I didn't cut my price; still selling packs briskly. I believe too many garden centers cut their prices too early." Another response, dated July 20, stated, "Still selling 2,000 pots of 4-inch plants a week."

And according to BPI study analyst, Alvi Voigt, bedding plant volume figures are a good single indicator as to the total success of a garden center. "Let me see their displays of bedding plants or the sales data showing the volume of bedding plants, and I can tell you how they are faring as a garden center," says Voigt. "Garden centers that are having more rapid sales increases almost invariably target in on bedding plants."

Voigt, an agricultural economist at Pennsylvania State University, further explains, "My hypothesis is that as bedding plants go, so go some of these garden centers....Bedding plant sales volume is a good litmus test."

Voigt may only be hypothesizing, but it is a well-known fact that bedding plants, especially those in bloom, are excellent traffic builders in the spring. So, now some progressive retailers are also using them to extend the season into the summer, a season previously thought of as a down season by many segments of the lawn and garden industry.

While many other products have seen their ups and downs, bedding plants have consistently produced a steady growth curve for more than a decade. Color in the landscape has been a rallying point for the marketers and retailers who need to give their sales a new stimulus from time to time; extending the season through sales of bedding plants may just be that stimulus.

And from a retail viewpoint, the bedding plant market also means longer tie-in sales of large colorful planters, potting media, watering equipment, fertilizer, chemicals and other supplies. If sales of these bedding plants are made in the summertime, sales of supplies and accessories will be stimulated as well.

Through a little advance planning, timely reseeding and the development of new marketing strategies, later sales of bedding plants may just be the answer to extending the season, keeping the customers coming and making up for long, wet springs. □

## Average price increases

| | Per Flat | | Per Pack | |
|---|---|---|---|---|
| | Cents | Percent | Cents | Percent |
| 1982 | .60 | 9.9 | .14 | 10.6 |
| 1983 | .66 | 13.7 | .17 | 7.5 |
| 1984 | .60 | 6.9 | .12 | 7.0 |

Source: 1984 annual BPI study